UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/392,817	09/09/1999	JOHN W. STAYT JR.	STAYT-26	1819

7590   06/18/2004

THEODORE NACCARELLA ESQIRE
SYNNESTVEDT & LECHNER LLP
2600 ARAMARK TOWER
1101 MARKET STREET
PHILADELPHIA, PA 191072950

EXAMINER
LONSBERRY, HUNTER B

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-87_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-87_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _27 March 2000_ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 8-13, 23, 24, 31-34, 66, 67 and 73-74, are rejected under 35

U.S.C. 102(e) as being anticipated by U.S. Patent 6,728,965 to Mao.

Regarding claims 1, 2, 4, 8, 9, 23, 24, 31, 33, 34, 66, 67, Mao discloses a digital

video system in which MPEG data is transmitted to a user, the system only delivers

data for 1-2 channels at a time but constantly buffers at least 15 frames for each

channel in a FIFO buffer, so that the video data is constantly refreshed, when a user

changes the channel, BDU 12 then reads out the stored data and synchronizes with the

video signal for the new channel for display (column 5, lines 33-44, column 6, lines 30-

39, column 8, line 27-column 9, line 31).

Regarding claim 3, 32, the stb 19 informs BDT 12 that the user has changed a

channel and desires to view the entire program stream (column 8, line 27-column 9, line

31).

Regarding claim 10, Mao discloses that the user may receive 40 different

channels (column 8, lines 59-64) but only receives 1-2 channels simultaneously (column

5, lines 33-38).

Mao inherently stops full transmission of the previous channel, when in a 1

channel mode, as Mao discloses that data for only 1-2 channels may be delivered at

one time, otherwise Mao would be exceeding the available bandwidth and be unable to

deliver any additional programs.

Regarding claims 11-13, Mao discloses a digital video system in which MPEG

data is transmitted to a user, the system only delivers data for 1-2 channels at a time

but constantly buffers at least 15 frames for each channel in a FIFO buffer, so that the

video data is constantly refreshed, when a user changes the channel, BDU 12 then

reads out the stored data and synchronizes with the video signal for the new channel for

display (column 5, lines 33-44, column 6, lines 30-39, column 8, line 27-column 9, line

31).

Regarding claims 73-74, Mao discloses a digital video system in Figure 1 in

which MPEG data is transmitted to a user stb 19 from an ATM network, the system only

delivers data for 1-2 channels at a time but constantly buffers at least 15 frames for

each channel in a FIFO buffer 50 within BDU 12, so that the video data is constantly

refreshed, when a user changes the channel, BDU 12 then reads out the stored data

informs the BDU 12 of the channel change which then transmits the new channel data

and STB synchronizes with the video signal for the new channel to display (column 5,

lines 33-44, column 6, lines 30-39, column 8, line 27-column 9, line 31).

Mao's STB inherently contains a processor and memory as Mao discloses that

MPEG 2 video is transmitted, and to decompress digital video, a processor is required

and memory is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5, 6, 14, 15, 25, 35, 36, 56, 68, and 81 are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent 6,728,965 to Mao in view of U.S. Patent

5,734,589 to Kostreski.

Regarding claims 5, 6, 14, 15, 25, 35, 36, 56, 68, and 81, Mao discloses an

MPEG video system which caches data for each channel in a FIFO buffer, the data is

constantly overwritten as new data enters and time passes, the data is used to display a

video signal until the full signal is received.

Mao does not disclose storing time stamp information corresponding to the

buffered data that indicate the time to read the data out and indicating what channel the

sample corresponds.

Kostreski discloses a digital terminal which receives MPEG data, determines

time stamp information, and receives a channel map which associates program streams

with channels, and MPEG information which identifies a program's source (column 6, line 54-column 8, line 8, column 16, lines 8-30, column 31, lines 1-20)

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Mao to store the MPEG data, time stamp information and channel id information as taught by Kostrecki to enable a STB to facilitate rapid channel changes by a user.

Claims 7, 16-18, 27-29, 45-50, 57-60, 62-63, 70, 71, 78, 79 80, and 82-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,728,965 to Mao in view of U.S. Patent 6,546,426 to Post.

Regarding claims 7, 16, 19-20, 37, 49, 50, 70, 71, 82, Mao discloses a digital video system in which MPEG data is transmitted to a user, the system only delivers data for 1-2 channels at a time but constantly buffers at least 15 frames for each channel in a FIFO buffer, so that the video data is constantly refreshed, when a user changes the channel, BDU 12 then reads out the stored data and synchronizes with the video signal for the new channel for display (column 5, lines 33-44, column 6, lines 30-39, column 8, line 27-column 9, line 31). Processor 55 keeps track of the most current I frame (column 9, lines 9-25).

Mao does not disclose selecting a sample for a selected channel with a time stamp closest to the current time.

Post discloses in figure 7, a processes in which time stamped video data is stored in a buffer, a processor searches for video associated with the current time for playback (column 5, lines 39-64).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Mao to synchronize with the time stamp closest to the current time as taught by Post to ensure that both audio and video data would be synchronized upon playback.

Regarding claims 17, 27-29, 45, 57-60, 78, 79, and 84, Mao discloses that the position of each I-frame is traced by processor 55, and that data for time after the current time is buffered, so that synchronization will be preformed seamlessly as it takes roughly ½ second to transmit the channel change command and receive the new data (column 5, lines 33-44, column 6, lines 30-39, column 8, line 27-column 9, line 31).

Regarding claims 18, 46-48, 62-63, 80, 83, and 85, Mao discloses an MPEG video system, which caches data for each channel in a FIFO buffer, the data is constantly overwritten as new data enters and time passes.

Mao does not disclose the use of timestamps and overwriting data if it is stale.

Post discloses the use of time stamps but fails to disclose overwriting data if it is stale.

The examiner takes official notice that the use of timestamps and overwriting stale data is well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Mao and Post to utilize a timestamp for data and overwrite stale data in order to maximize the available buffer memory to retain only the latest data.

Claims 26, 38, 53-55, 69, and 75-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,728,965 to Mao.

Regarding claims 26, 38, 55, 69, and 75, Mao discloses that the TV channels contain MPEG-2 video data (column 7, lines 39-44).

Mao does not disclose that the TV channels contain TV programs.

The examiner takes official notice that the use of MPEG-2 video to carry television programs is well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time of invention to utilize MPEG 2 to carry TV programs in order to take advantage of the image quality MPEG 2 provides.

Regarding claims 53, 54, Mao discloses a digital video system in Figure 1 in which MPEG data is transmitted to a user stb 19 from an ATM network, the system only delivers data for 1-2 channels at a time but constantly buffers at least 15 frames for each channel in a FIFO buffer 50 within BDU 12, so that the video data is constantly refreshed, when a user changes the channel, BDU 12 then reads out the stored data informs the BDU 12 of the channel change which then transmits the new channel data and STB synchronizes with the video signal for the new channel to display (column 5, lines 33-44, column 6, lines 30-39, column 8, line 27-column 9, line 31).

Mao's STB inherently contains a processor and memory as Mao discloses that

MPEG 2 video is transmitted, and to decompress digital video, a processor is required

and memory is required.

Mao does not disclose the buffering system being located within a node, but

instead locates it within BDT 12.

The examiner takes official notice that the use of local caching systems is well

known in the art.

Therefore, it would have been obvious to one skilled in the art at the time of

invention to modify Mao, to locate the caching apparatus locally, to reduce the channel

changing delays.

Regarding claims 76 and 77, Mao discloses that BIU 15 may communicate with a

NIC inside a PC, and that STB outputs video to a television 39 (figure 1, column 4, lines

34-45).

Mao does not disclose outputting TV data to a monitor.

The examiner takes official notice that the use of a TV tuning card to display

video on a monitor is well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time of

invention to modify Mao, to display video on a PC monitor, to enable a user to watch TV

while utilizing a computer.

Claims 21, 30, 51, 64, 72, and 86 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,728,965 to Mao in view of U.S. Patent 6,157,929 to

Zamiska.

Regarding claims 21, 30, 51, 64, 72, and 86, Mao discloses a digital video

system in Figure 1 in which MPEG data is transmitted to a user stb 19 from an ATM

network, the system only delivers data for 1-2 channels at a time but constantly buffers

at least 15 frames for each channel in a FIFO buffer 50 within BDU 12, so that the video

data is constantly refreshed, when a user changes the channel, BDU 12 then reads out

the stored data informs the BDU 12 of the channel change which then transmits the new

channel data and STB synchronizes with the video signal for the new channel to display

(column 5, lines 33-44, column 6, lines 30-39, column 8, line 27-column 9, line 31).

Mao does not disclose that the samples are of lower resolution than the full

channel data.

Zamiska discloses a system in which digital information may be transmitted at

different quality levels, this data is then cached and played back to a user (column 5,

line 63-column 6, line 59, column 18, line 47-column 19, line 25).

Therefore it would have been obvious to one skilled in the art at the time of

invention to modify Mao to transmit a low quality sample as taught by Zamiska thus

enabling a user to utilize a quickly rendered preview to aide a user in selection.

Claims 22, 52, 65, and 87 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,728,965 to Mao in view of U.S. Patent 5,583,560 to

Florin.

Regarding claims 22, 52, 65, and 87, Mao discloses a video buffering system.

Mao does not disclose displaying multiple channels simultaneously.

Florin discloses a video system in Figures 33-35, in which multiple PIP windows

are displayed simultaneously, a user then selects a program to watch (column 20, line

20-column 21, line 17).

Therefore it would have been obvious to one skilled in the art at the time of

invention to modify Mao to display multiple channels as taught by Florin to enable a

user to rapidly select a program of interest.

Claims 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent 6,728,965 to Mao in view of U.S. Patent 6,337,715 to Inagaki.

Regarding claims 39-43, Mao discloses a video buffering system, which buffers

at least 15 frames for each channel.

Mao does not disclose assigning priority to different channels, determining the

amount of time a user watches a channel in order to transmit and store more sample

data for popular channels and buffer sizing.

The examiner takes official notice that priority buffer sizing, including priority

queuing schemes, is well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Mao to utilize priority buffer sizing to ensure that a user's favorite channels are switched to seamlessly.

Inagaki discloses a priority transmission system, which determines what the most popular channels based on viewing time and then prioritizes the transmission each different channel according to how often it is transmitted (column 18, line 17-column 20, line 11).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Mao with a priority buffer sizing feature to utilize the priority transmission system of Inagaki to ensure that a user's favorite channels are switched to seamlessly and to maximize the available bandwidth by transmitting programs which the user would be most interested in.

Regarding claim 44, Inagaki discloses that user viewing habits are determined by administrator 27 (column 18, lines 31-35).

Mao and Inagaki do not disclose determining the amount of time that a user watches at channel by a device at the program source.

The examiner takes official notice that reporting viewing habit information, which is then processed at a source location, such as a headend, is well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Mao and Inagaki to determine a user's video habits at a source location, in order to reduce the complexity of the STB device.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,449,688 to Peters: Computer System and Process for Transferring Streams of Data Between Multiple Storage Units and Multiple Applications in a Scalable and Reliable Manner.

U.S./ Patent 6,327,418 to Barton: Method and Apparatus Implementing Random Access and Time-Based Function on a Continuous Stream of Formatted Digital Data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 703-305-3234. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBL

HAI TRAN
PATENT EXAMINER